



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Adress: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,551	12/22/2004	Hea-Chun Lee	6192,0512.US	8425
32605	7590	05/12/2008	EXAMINER	
MACPHERSON KWOK CHEN & HEID LLP			MAY, ROBERT J	
2033 GATEWAY PLACE			ART UNIT	PAPER NUMBER
SUITE 400				2885
SAN JOSE, CA 95110			MAIL DATE	DELIVERY MODE
			05/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/518,551	Applicant(s) LEE, HEA-CHUN
	Examiner ROBERT MAY	Art Unit 2885

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 February 2008.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 and 25-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 21 and 25-33 is/are allowed.
- 6) Claim(s) 1-20 and 34-39 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/06)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

The amendment filed February 20, 2008 has been entered.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 34 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 34 recites the limitation "the second reflecting plate of the light reflecting member" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 5-9, 11 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torihara (6,609,807) in view of Suzuki (2001/0036068)
6. In regard to Claims 1 and 11, Torihara discloses in Figure 1 a light guide plate 3, comprising an incident face (vertical face of light guide 3, shown not labeled adjacent to

light sources 2), a light reflecting face (the bottom horizontal surface) which reflects the light towards a light exiting face 3a, a light reflecting member 4 for covering the light incident face forming a light receiving space that is defined by the light reflecting member 4 and incident face, at least two lamps 2 spaced apart from each other by a second distance wherein the sum of the distance between the lamps 2 and both diameters of the lamps are shown to be greater than the first distance being the width of the incidence face, and a receiving container 16, 13, 17 for receiving the light guide plate 3, and light reflecting member 4.

7. Torihara fails to disclose the light reflecting member 4 including a chamfer disposed at an edge enhancing the reflecting efficiency at a corner of the light reflecting member.

8. Suzuki discloses in Figure 2, a chamfer (shown but not labeled) located at an edge of the reflecting member 8 for better reflecting the light towards the incidence face of a light guide 11 and enhancing the reflection efficiency at a corner of the reflecting member.

9. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the reflecting member of Torihara with the chamfered edge of Suzuki for better reflecting the light towards the incidence face of a light guide 11 and enhancing the reflection efficiency at a corner of the reflecting member.

10. In regard to Claim 11, in addition to the elements recited in Claim 1, Torihara further discloses in Figure 1, a liquid crystal display panel 6 which faces the light exiting

face 3a and is received by the container 16, 13, 17 and a chassis 13 where a first portion thereof presses against an edge of the liquid crystal display panel 6 (firmly held to the LCD panel 6 Cols 6-7, 67+).

11. Regarding Claims 1 and 11 regarding the added limitation that a virtual line passes through centers of the two lamps meeting the light reflecting member (interpreted to mean at the chamfer), it would have been obvious to one of ordinary skill in the art at the time the invention was made to re-arrange the lamps so that the top lamp is at the top left corner of the receiving space (on the left side portion of the backlight module) as a known alternative to the disclosed configuration to suit a particular application or geometrical configuration, since it has been held that rearranging parts of a prior art structure involves only routing skill in the art. *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

12. In regard to Claims 5 and 15, Torihara discloses in Figure 1, the two lamps 2 as having the same diameter.

13. In regard to Claims 6 and 16, Torihara discloses in Figure 1, the lamps including a first lamp 2 and a second lamp 2 wherein a first lamp is shown to be positioned at a first edge of the light incident face and the reflecting face 4 and the second lamp disposed near a second edge diagonally opposite to the first edge.

14. In regard to Claims 7 and 17, Torihara fails to disclose the light reflecting member as including a chamfer disposed at the second edge.

15. Suzuki discloses in Figure 12, a chamfer (shown but not labeled) located at an edge of the reflecting member for reflecting the light towards the incidence face, but fails

to show the chamfer as being located at the second edge as claimed being diagonally opposite to the incident and reflecting face edge. Variations in reflector shape, such as the chamfer of Suzuki, are well known methods of improving the light reflection in backlight assemblies such as that of Torihara. Accordingly, it would have been obvious to locate a chamfer where needed including at the second edge, on the backlight of Torihara.

16. Regarding Claims 8 and 18 Torihara fails to disclose the first lamp being disposed near a third edge and a second lamp being disposed near a fourth edge being diagonally opposite to the third edge.

17. It would have been an obvious expedient to reverse the first and second lamps so that the first lamp resides at the third edge and the second lamp is positioned at the fourth edge being diagonally opposite to the third edge for accommodating a particular configuration of the backlight assembly *see In re Gazda*, 219 F.2d 449, 104 USPQ 400.

18. In regard to Claims 9 and 19, Torihara fails to disclose a chamfer disposed at the fourth edge.

19. Suzuki discloses in Figure 2, a backlight assembly with a reflecting member 8 having a chamfer at a fourth edge diagonally opposite to the third edge for directing the light towards the incidence face.

20. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the reflecting member of Torihara with the chamfer of Suzuki to direct the light towards the incident face.

21. Regarding Claims 34 and 37, Torihara discloses the light reflecting member 4, positioned adjacent to the receiving container 16, 13, 17 so as to make contact therewith.
22. Regarding Claims 35 and 38, as best understood, Torihara fails to disclose a second reflecting plate of the light reflecting member positioned between the light reflecting face of the light guide and the receiving container so as to form a gap therebetween.
23. Suzuki discloses in Figures 1-2, a reflecting member 8 having a second reflecting plate (bottom horizontal surface of reflecting member 8) forms forming a gap between the bottom reflecting face of the light guide 11 and receiving container 54 forming a gap therebetween. This would enable the reflecting assembly for each side of the light guide be disassembled or assembled from or with the light guide independently of the other.
24. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to having a second reflecting surface of the reflecting member form a gap between the light guide and the receiving container allowing for enabling the reflecting assembly for each side of the light guide be disassembled or assembled from or with the light guide independently of the other.
25. Regarding Claims 36 and 39, Torihara discloses the two lamps 2 spaced apart from the light reflecting member 4.

26. Claims 2-4, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torihara (6,609,807) and Suzuki (2001/0036068) as applied to Claims 1 and 11 respectively and further in view of Imai (5,253,089).
27. Torihara fails to disclose a groove in the incident face having a cross section that is V-shaped or curved.
28. Imai discloses in Figures 1 and 2 a backlight assembly with light guide 30,32 having a groove at the incident face with a V-shaped 33 or curved shape 31 cross section so that a larger section of the incident face is contacting or exposed to the light source 17 (Col 3, lines 22-35).
29. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the incident face of Torihara with the curved or V-shaped grooves of Imai so that a majority of the incident face is in contact with the light source.
30. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torihara (6,609,807) and Suzuki (2001/0036068) as applied to claims 1 and 11 above, and further in view of Nagatani (6,672,733).
31. Torihara fails to disclose the centers of the lamps positioned in a same plane that is parallel to the light exiting face or horizontal.
32. Nagatani discloses in Figure 13 a first and second lamp 43G, 43RB wherein the centers thereof are positioned on a plane that is parallel to the light exiting face (upper

horizontal face of light guide 1) which provides for a shorter vertical profile or width of the backlight assembly with the two lamps arranged in such parallel configuration.

33. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to position the lamps of Torihara in a parallel configuration to shorten or reduce the vertical profile of the backlight assembly.

Response to Arguments

34. Applicant's arguments with respect to claims 1 and 11 have been considered but are moot in view of the new ground(s) of rejection.

35. Torihara is seen to disclose all of the limitations except for enhancing light at a corner portion of the light reflecting member using a chamfer.

Allowable Subject Matter

36. Claims 21 and 25-33 are allowed.

37. The following is a statement of reasons for the indication of allowable subject matter:

38. Regarding Claims 21 and 33, the prior art does not teach or show a backlight assembly comprising a light guide plate with a light incidence width having a first distance and a light reflecting member covering the light incidence face forming a lamp receiving space with at least two lamps disposed in the lamp receiving space where the sum of diameters and the distance between the two lamps or second distance is larger

than the first distance and the highest point of a lower lamp is higher than the lowest point of an upper lamp.

Conclusion

39. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT MAY whose telephone number is (571)272-5919. The examiner can normally be reached on Mondays through Fridays 9am-12pm & 1-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jong-Suk (James) Lee can be reached on (571) 272-7044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John A. Ward/
Primary Examiner, Art Unit 2885

RM
5/1/08